New England Deaconess Hospital

pulse

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Chapter 372: a new law drastically changes hospital operations in Massachusetts

What is Chapter 372, and why is everyone in the Massachusetts health care industry concerned about it? Chapter 372, a new state law which went into effect this past October, has forced hospitals across the Commonwealth to cut millions of dollars from their budgets for this fiscal year; to postpone or eliminate plans to add staff, expand services or initiate new projects; and, in some cases, has compelled hospitals to lay off employees.

Although the long-term ramifications of Chapter 372 are still uncertain, there is one point on which everyone agrees — the new law will change the quality and type of health care that consumers will receive in Massachusetts for years to come.

The following story will examine the intent of Chapter 372, its immediate impact on hospitals in Massachusetts, and will discuss how the Deaconess is adapting to these radical changes in the health care industry.

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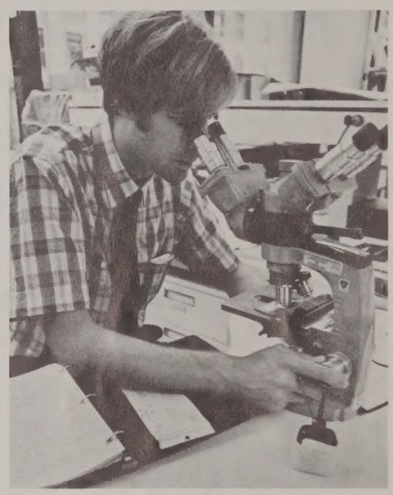
Marvin G. Schorr, chairman of the NEDH Board of Trustees, is not particularly surprised that the Massachusetts hospital industry was faced by legislation which resulted in a law such as Chapter 372. "I see a direct parallel between this new law and Proposition 2½," explained Schorr. "Concerned citizens have proclaimed, 'Enough is enough, you will not spend any more money.' But they did not understand the problems inherent in the system well enough to make specific adjustments," he pointed out.



Under Chapter 372, will teaching hospitals be able to maintain their leadership role in patient care, research, education and technology?

"The only way they seemed able to deal with the rising cost of health care was to place arbitrary caps on spending."

The "they" in this case refers not only to the recipients of health care services, but to the people who provide insurance, those who purchase it, and government officials who oversee federal health care programs with budgets which have increased at an alarming rate each year. In 1982, the cost of providing health care in Massachusetts was estimated at 30% above the national average.

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Trustees approve liver transplants

The NEDH Board of Trustees has approved feasibility studies of liver and pancreas transplantation programs, prepared by management and the medical administrative board, which recommend implementation of such programs at the Deaconess.

"If any institution in the country is qualified to do liver and pancreas transplantation, it's the Deaconess Hospital," said Marvin G. Schorr, board of trustees chairman. He said the programs would utilize and deepen existing medical staff strengths in surgery, gastroenterology, diabetology, transplant immunology, infectious disease and nutritional support.

Implementation of the liver transplantation program, however, will depend on whether third-party payers will cover the procedure and on decisions made by the Massachusetts Department of Public Health regarding which hospitals within the state will be permitted to perform the procedure.

The Deaconess currently has an extensive renal transplantation service, transplanting more than 50 kidneys a year. An experimental pancreas transplantation program will strengthen NEDH's affiliation with the Joslin Diabetes Center and will offer a potential cure to diabetic patients who are faced with lifelong dependency on medication and serious complications from the disease. Until the procedure is deemed clinically acceptable by the government and third-party payers, research funds will be sought to support the program.

If the Deaconess does initiate liver and pancreas transplantation programs, clinical and financial results will be monitored closely and reported to the hospital's board of trustees.

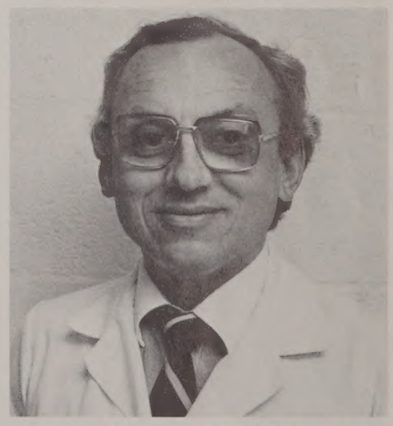
Dr. Hawiger named director of experimental medicine division

Jack J. Hawiger, MD, PhD, internationally renowned research scientist in hematology, has been appointed director of the new NEDH Division of Experimental Medicine in the department of medicine.

Formerly professor of medicine and pathology at Vanderbilt University School of Medicine, Nashville, Tennessee, Dr. Hawiger specializes in the study of hemostasis (arrest of bleeding) and thrombosis (formation of blood clots). He is past director of the hemostasis and thrombosis unit at Vanderbilt's University Medical Center.

In laboratories at the Cancer Research Institute of the Deaconess, Dr. Hawiger and his research team will continue their basic studies of the mechanisms involved in blood clot formation (coagulation), and their applied research on drugs designed to slow down, or prevent, this formation. Research conducted by Dr. Hawiger and his team at the Deaconess is sponsored through grants from the National Heart, Lung and Blood Institute. This research has contributed to the understanding and better management of patients with disseminated intravascular coagulation in septic shock, ischemic heart disease (coronary artery spasm or occlusion), thrombocytopenia (decrease in number of platelets) and von Willebrand's disease (vascular hemophilia).

"It is important to understand blood clotting," said Dr. Hawiger, "because formation of blood clots at the wrong place and at the wrong time is responsible for some forms of heart attacks, strokes, and obstruction of blood vessels in the lungs and the kidneys. Approximately 500,000 Americans die every year due to clots formed in the blood vessels supplying vital organs



Jack J. Hawiger, MD

such as the heart and lungs," stated Dr. Hawiger.

"A better understanding of how coagulation works in normal condi-

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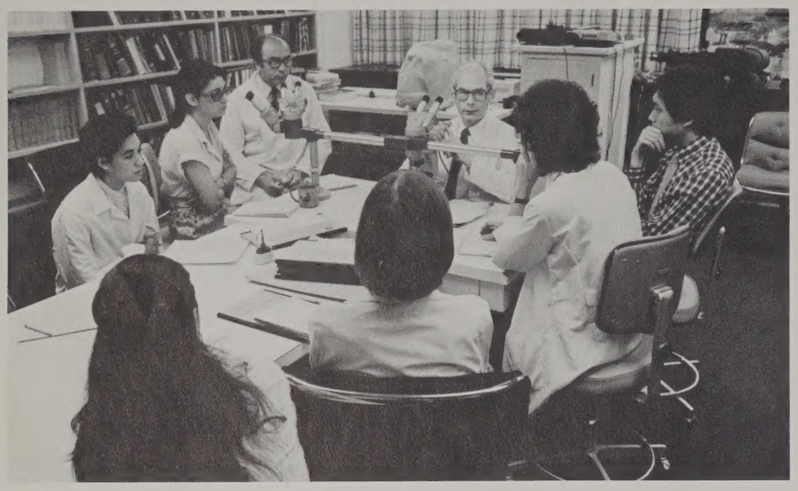
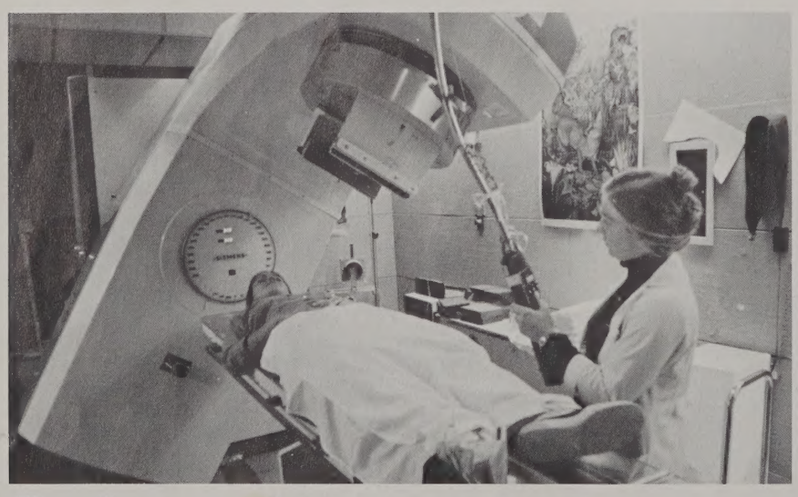
Chapter 372 encourages hospitals to:



Educate a new generation of physicians to help control the cost of delivering medical treatment

Decrease use of ancillary services



Perform exams and minor surgical procedures on an outpatient basis

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Business leaders push for legislation

The driving force behind new legislation to halt this trend was a group of Massachusetts business leaders who were feeling the strain of purchasing increasingly expensive health care insurance for their employees. As president of his own company, Schorr is sensitive to the problem. "We saw Blue Cross rates rise to the point where we were paying $2,000 in benefits for an employee who was making $16 - 18,000 a year!" he said.

The Massachusetts Business Roundtable, comprised of representatives from 55 of the state's largest companies, led an unprecedented coalition of hospital administrators, insurers, business leaders and state representatives in hammering out Chapter 372. The coalition had two major incentives to stay at the bargaining table: by passing cost control legislation, and by receiving waivers from the federal government so that Medicare could participate in the proposed system, Massachusetts would be able to avoid cutbacks in the Medicare program which were slated for this year. Otherwise, the state would have faced a reduction of $60 million in the Medicare budget. The second incentive was that commercial insurers threatened to pull out of the state's market, as they did in New York, if the Massachusetts hospitals continued to shift higher costs onto private payers.

Faced with such internal and external pressure to reach an agreement, a final proposal was approved by the coalition last summer, passed by the state legislature during a special session, and signed into law by the governor. "Few, if any, legislative actions have occurred within such a tight timeframe," observed NEDH President Laurens MacLure. "Within a six-week period, the state had switched almost completely from a retrospective, cost-based program to a prospective payment system for third-party payers*."

What Chapter 372 accomplishes

Chapter 372 marks the first time in Massachusetts history that all hospital sources of patient care revenue will be governed by one uniform set of reimbursement policies. A *prospective* payment system means that hospitals now will receive a predetermined amount from each payer for services provided. In the past, hospitals were reimbursed primarily on a retroactive system, based on what it actually cost for that particular service. The retroactive method often provided conflicting financial incentives for hospitals, and also permitted them to manipulate the system by shifting unreimbursed costs from government and other payers onto commercial insurance companies and self-paying patients.

In addition to this radical change in the third-party payment system, hospitals are required to stay within a specific budget each year while, at the same time, improving overall productivity at a mandated rate.

These three changes — restructuring the third-party payment system, setting specific budget limits and mandating productivity goals — provide strong financial incentives for hospitals to accomplish the following:

- lower use of ancillary services;
- shorten length of stay;
- increase use of outpatient services;
- decrease amount of high intensity cases.

A clear intent of Chapter 372 is to push hospitals to concentrate their resources in proven, productive areas where they have the most experience and expertise.

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*See definition below

What are "third-party" payers?

Today, most hospitals in the United States depend on "third-party" payers as their major source of revenue (the other "parties" being patients and health care providers). In Massachusetts, hospitals receive about 30 percent of their revenue from Blue Cross, 20 percent from commercial (for-profit) companies and self-paying patients, 35 percent from Medicare and 15 percent from Medicaid.

Individuals can make a contractual agreement, either singly or in groups, with Blue Cross or commercial insurers who promise to pay for an agreed upon range of services, under specified conditions. The insurer pays the benefits directly to the subscriber, or to the provider of the services. Premiums are paid by the individual or by the company which purchases benefits for its employees.

The major third-parties operating in Massachusetts include:

Blue Cross/Blue Shield, a private nonprofit, tax-exempt membership corporation which directly pays the provider of hospital or medical care for services rendered.

Commercial insurance companies which pay benefits directly to the subscriber or to the hospital, under the terms of the subscriber's individual contract with that company.

Medicare, a health insurance program for people who are 65 or older, and for some people under the age of 65 who meet certain criteria. It is a federal government program administered by the Social Security Administration.

Medicaid, a state-administered program which provides health care benefits for public welfare recipients.

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How does the Deaconess fare under Chapter 372?

Chapter 372 makes no distinction between community and tertiary (acute care) facilities. The new law provides disincentives for increased volume of complex, high-intensity cases — an economic disadvantage for specialty-referral hospitals such as the Deaconess.

Nevertheless, the Deaconess does not intend to abandon its commitment to diagnosis, treatment, research and nutritional support in the specialized fields of cancer, diabetes and cardiac and renal diseases, or its work in chest surgery and organ transplantation.

All Deaconess officials and physicians interviewed agree that the development of new technology, research and education cannot stand still because of Chapter 372. "How we fill our mission is changing, but not the mission itself," MacLure emphasized. "Hospitals will have to be more selective in the services they choose to offer. In taking on liver transplantation (see story on page 1), we may have to give up something in another area. Hospitals can't be all things to all people any longer."

The immediate financial impact for the Deaconess was to cut over $2 million from this fiscal year's budget. The reductions were made with two objectives: the Deaconess would not implement any reduction which would compromise high quality patient care; the Deaconess would not implement any general layoffs of employees.

Board Chairman Schorr observes that it is not surprising to find that "fat" has developed in the health care industry over the years, due to the lack of emphasis on efficiency and because of conflicting incentives within the payment system. "The Deaconess was able to make fairly substantial cuts now, in the early stages, but once that layer is removed, we're going to have some very hard choices to make," said Schorr.

Chapter 372 is not a one-shot attempt to control hospital costs. It is a three-year experiment with mandated budget limitations and productivity increases for each year of the contract. If a hospital can hold its total expenses below a certain amount, it can keep the savings realized. If a hospital exceeds its limit (maximum allowable cost), it cannot shift the excess costs to commercial insurance companies or private payers. Savings in the first year of the "experiment" have the potential to be compounded over the second and third years of the contract. For this reason, the earlier and more completely that the Deaconess meets its goals, the better off the institution will be financially throughout the law's term. Depending upon the results of Chapter 372, the new prospective system would continue past 1985.

Budget formulas for each hospital are based upon their expenses during

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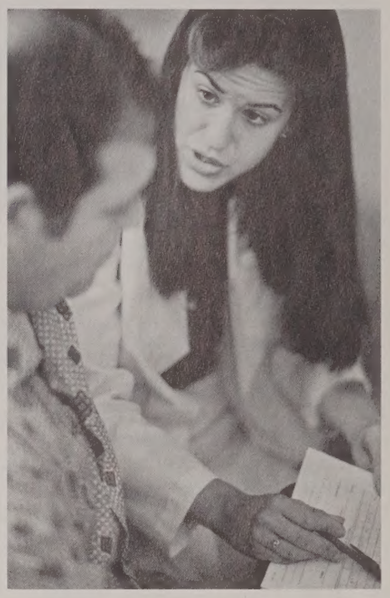
Board Chairman Marvin G. Schorr



fiscal year 1981, which means that hospitals are basically in competition with themselves. Critics argue that the most efficient and well-managed hospitals are penalized by such an arbitrary selection since poorly managed institutions have more "fat" to cut. "For years we at the Deaconess had the lowest number of employees per bed and the lowest charges among teaching hospitals," said Director Richard E. Lee. "This unfairly assumes that all hospitals start from the same vantage point." Under Lee's guidance, administrators and department managers were requested to make reductions in their departmental budgets to meet the Chapter 372 goal for this year. "The trick is to be very careful to remove what takes away the least in service, but saves the greatest amount of money in doing it," explained Lee. "It's an unending process. You constantly have to ask, 'what's the best way of doing this job?'." He disagrees that hospitals are taking a more "business-like" approach to health care economics — "we *have* practiced good management techniques," Lee said. "What's different now is that we have been mandated to 'do more, and to do it better'."

Departments reduce expenses

Joyce Tower, director of dietetics, oversees a food service operation which feeds patients, employees and visitors, and is head of a clinical nutritional component which monitors specific diet requirements for patients with special needs. Tower has been able to reduce expenditures by initiating self-service for some items in the cafeteria, using dietetic interns to cover vacation and weekend shifts, replacing well-known brands with generic ones and restructuring the patient menu system. These changes were relatively easy to implement. Some of them were planned before Chapter 372 came along. It's the next step that concerns Tower. "Certain basic objectives are obvious to everyone as essential to this department's operation," Tower remarked. "The quality of our food has not and will not suffer. But we have always prided ourselves on anemities for our patients; it's hard to see them go. We also have to compromise on the quantity of time we spend with our patients," she continued. "We have to constantly ask ourselves, what is the direct benefit to our patients of the time we spend with them today."

Physician involvement

Prior to Chapter 372, the emphasis in health care was on providing the best patient care possible. "When a physician says we need to spend money in this area to save lives, how can we say 'no'?," asked NEDH Director Lee. "The only argument against spending was morally unjustified."

Understanding and active support from physicians in meeting Chapter 372 requirements is crucial for the hospital's survival. Physicians ultimately determine which patients need to be hospitalized, and for how long, and they order the ancillary and laboratory tests. Deaconess management has worked closely with the chiefs of service in considering where physicians might help to contain costs.

Dr. Carl S. Hoar Jr., president of the medical staff, considers it to be good medical economics for physicians to realize how much tests cost and to consider that fact before ordering them. For example, he believes that physicians should re-examine the need to request new studies when called in for a consultation. "There's a real conflict between practicing good medical economics and the education of residents," Dr. Hoar explained. "Residents always have been responsible for laboratory test management so that they can learn. But I think they can still learn while receiving more guidance from attending physicians."

Dr. Hoar acknowledges that more supervision of residents means a time commitment on the part of physicians, but he believes it is necessary in order to achieve reductions in this area. Dr. Hoar sees the need for closer coordination between physicians and other departments — social services, for example, so that elderly patients can be transferred home or to other facilities when their medical treatment is completed at the Deaconess.

Physicians also are working closely with other disciplines to control the number of tests ordered. Dr. Melvin E. Clouse, chairman of the diagnostic radiology department, has prepared charts for physicians to follow when making a diagnosis so workups are expedited and unnecessary tests are eliminated. A radiologist is consulted before expensive tests are initiated. "We continue to learn more ourselves with every advancement in technology," said Dr. Clouse. "But we aren't at the point yet where one exam can fully replace another. An ultrasound is sensitive, but operator-dependent. A computed tomography scan (CT scan) sometimes can give you extra information. You don't want to overlook anything which could affect medical treatment."

Employee participation

Chapter 372 is not simply a problem for management personnel and physicians. In order to survive and prosper under the new regulations, cooperation, understanding of and participation in cost containment ventures will

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Jean Roy retires from nursing

As her husband, Romeo (r), looks on, Jean Roy, RN, nursing care coordinator, admires the gold bracelet presented to her by Director Richard E. Lee (l) at her retirement party in the Harris Hall Livingroom on March 21. More than 100 co-workers and friends paid tribute to Roy's 17 years of service at the Deaconess. "I can't decide whether to be happy or sad," said Lee during his farewell to Roy. After 40 years of nursing, Roy said she is looking forward to retirement and claims her husband will indoctrinate her into the "new life." "We'll enjoy our garden, golfing and a lot of visiting," Roy exclaimed. In addition to the gold bracelet, Roy received flowers from the permanent evening and night nursing staffs.

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be needed from all segments of the Deaconess community.

The NEDH Cost Containment Committee has sponsored a series of informational sessions on Chapter 372, and what the Deaconess is doing to adapt to the new law. MacLure, Lee and other Deaconess officials presented the information to employees who had an opportunity to ask questions and express their own concerns. The core group which attended the session was made up of 100 departmental representatives selected by their supervisors to work closely with the cost containment committee in communicating Chapter 372 information back to their colleagues.

Two departmental representatives, Susan Mandeville, a secretary from building services, and Edward Gomez, assistant laundry manager, have been active in cost containment efforts within their respective departments. They welcome the opportunity to learn about what other departments are doing to cut costs. "It's good to know that you're not the only department affected by Chapter 372," commented Gomez. "Hearing what's happening in other areas encourages you to come up with ideas."

Mandeville agrees, pointing out that in order to achieve effective cost savings across the board, employees from individual departments have to work together to solve problems. "By making key cost containment committee people more visible in the hospital, you have someone to contact if you need assistance from another department to implement your cost-savings measure," said Mandeville. "It's good that the hospital is making this effort to pull us together."

Patient care

There are many unanswered questions regarding Chapter 372. Will poor people be cut off from access to health care services? Will community hospitals refer all less financially attractive cases to tertiary care facilities? Although it is generally recognized that Massachusetts is "overbedded", the Massachusetts Hospital Association points out that the reasons for higher costs in the state — an increasingly older population and internationally renowned medical research and education facilities — will not disappear with the initiation of a prospective payment system.

"In the long run, the system must operate. Someone must deliver the tertiary care. Someone must educate the new generation of physicians, and conduct the research," said Marvin Schorr. "Tertiary facilities cannot operate under all of the same rules as community hospitals, and I think when all of this settles down, people will realize the nature of tertiary facilities."

Schorr believes that society has to recognize why such health care is expensive. "If society decides that everyone with renal failure is entitled to receive dialysis for the rest of their lives, then we are limited in the choices we can make in other areas."

Schorr and the other Deaconess community members interviewed are concerned that the quality of patient care will suffer under Chapter 372, with a corollary adverse effect on employee morale. "What I worry about is losing good employees to other industries," Schorr said. "The health care industry is dependent upon a group of people who derive a great deal of personal satisfaction from their service. It's tough for everyone at the Deaconess to see anything affect our level of patient care," continued Schorr. "What's best for the patient always has been our emphasis here. Over the next 20 years, we'll have to revise our concept of quality care. Maybe it won't be as good as in the 'good old days,' but the Deaconess still will be the best hospital to go to in Boston."

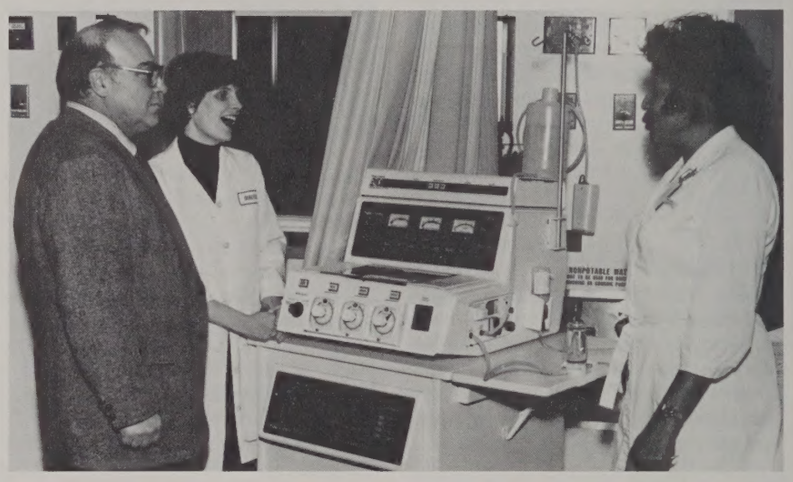
New dialysis unit opens on Palmer 1

The renal dialysis team recently hosted a reception and tour of their new peritoneal and home dialysis training unit on Palmer 1. The festivities began with a ribbon-cutting ceremony performed by Saul Grossman and Carrie Paulding (photo, below), Deaconess home dialysis patients.

Director of Nursing Ellen D. Howland welcomed the large group of Deaconess administrators, nurses, physicians, employees and patients who attended the open house. She also thanked the engineering and maintenance department for their work in renovating the former office area into a medical unit.

Peritoneal dialysis (PD) nurses led the guests on a tour of the six-station unit, which includes two hometraining areas. Staff Nurse Michelle Geraghty (center, photo below) explained the PD procedure to Sante Breda, service coordination, and Ethel Buggs, evening nursing supervisor.

PD involves the flushing of a special solution through a cavity between the layers of the tissue (peritoneum) which covers the abdominal contents. People with kidney failure need to undergo dialysis in order to replace the vital functions once performed by their kidneys. The 8 to 10 hour procedure can be done at the hospital or at home through the hospital's hometraining program.



Diabetic foot management course draws large response

A recent collaboration between the Deaconess' and the Joslin Diabetes Center's surgical and medical staffs drew 186 physicians to the hospital for a one-day course on diabetic foot management. Cosponsored by the Harvard Medical School's Department of Continuing Education, the course covered common foot problems for people with diabetes, including infection, neuropathic lesions and ischemia (local anemia due to lack of circulation to a part of the body). Response to the course was overwhelming and nearly 100 people were put on a waiting list for a repeat course in the fall.

The Deaconess sees more people with diabetes in one year than any other hospital in the country, said President Laurens MacLure in his welcoming remarks. One reason for that, he explained, is the hospital's affiliation with the Joslin Diabetes Center. On any one day, there are 200 patients at the Deaconess who have diabetes, and 10 percent of them are in the hospital with foot problems stemming from their disease. This high volume of foot-related conditions prompted the Deaconess to open one of the few residency training programs in podiatry in 1981. Nearly 10,000 visits were made to the podiatry department last year.

Dr. Frank C. Wheelock Jr., director of the course and chief of the Deaconess vascular surgery division, gave the first Dr. Leland Sterling McKittrick Memorial Lecture on transmetatarsal amputation. A former chief of staff at the Deaconess, Dr. McKittrick was a surgeon and teacher who, with Elliot P. Joslin, established the NEDH Foot Room. This service is staffed with specially trained nurses who provide the care for people with diabetes-related foot problems. Dr. McKittrick was the first surgeon to describe the transmetatarsal amputation, which eliminated the need for leg amputation in many people with diabetes.

Alumnae, save this date!

Saturday, October 29, 1983, has been selected as the 15th Annual Alumnae Reunion Day for the School of Nursing. Remember to mark this date on your calendar. Program information and a registration form will appear in future issues of PULSE.

Volunteers who reached the 100-hour service mark this year are (back row, l - r): Isabel Morrison, messenger service (167 hrs.); Phyllis Salloway, renal unit, dietary office (277 hrs.); Barbara Beach, thrift shop (166 hrs.); Nancy Harrison, library cart (292 hrs.); (front row, l - r) Ann Hayes, arts and crafts (176 hrs.); Elsie Soeldner, library cart (132 hrs.); Mary Gallagher, patient services (218 hrs.). Not shown are: Jaylyn Chavis, Deaconess 4 (219 hrs.); Dorothy Magadien, training (641 hrs.); Claudette Markell, patient services (163 hrs.); Elizabeth Valicenti, training (219 hrs.); Pamela Wallace, thrift shop, patient services (149 hrs.); Larry Weil, Group Against Smoking Pollution (434 hrs.)

United Way and NEDH honor hospital volunteers

Deaconess volunteerism made quite a splash this spring. Aron Steinberg, a volunteer for messenger service since 1978, was honored as one of ten outstanding volunteers by the Voluntary Action Center (VAC) of the United Way on April 29 during the Annual Volunteer Awards ceremony held in The Gallery, City Hall, Boston.

Nominated by the NEDH Volunteer Services Department for the VAC award, Steinberg has donated more than 3,000 hours to service to the Deaconess, volunteering twice a week and on-call when needed. A survivor of the Nazi concentration camps in World War II, Steinberg has surmounted this hardship and turned his energies toward helping others. In addition to his work at the Deaconess, he volunteers at other Boston-area hospitals and human service and civic organizations.

Voluntary Action Center has been an advocate on behalf of volunteers since 1920 and assists more than 500 agencies in finding volunteers.

Awards for volunteerism within the Deaconess Hospital also were presented to 13 Deaconess volunteers, who accrued their first 100 or more hours of service. These awards were presented during the NEDH Volunteer Service Awards Luncheon, held on May 4 at the Charles River Country Club, Newton.

These individuals were just a few of the 205 volunteers who have donated 20,120 hours of service over the past years. Housewives, retirees and former Deaconess employees, teachers and students comprise this year's group of volunteers who range in age from 15 to 80.

Associate Director David Lilley delivered remarks on Chapter 372's impact on volunteerism at the luncheon, and assisted Phyllis Wasserman, director of volunteer services, in presenting pins to the awardees. Administrative Assistant Martin Cernek presented certificates to 18 additional volunteers who have accrued between 300 and 10,000 hours of service.

Aron Steinberg, volunteer in the messenger service, was selected as one of ten outstanding volunteers by the Voluntary Action Center of the United Way. Congratulating Steinberg at the awards ceremony are (l-r) Liz Walker, anchorwoman for WBZ-TV's "Eyewitness News" and ceremony participant; Phyllis Wasserman, NEDH Director of Volunteer Services; Marianne B. Abrams, chairwoman of the Center's advisory board.

News in Brief

Twenty-five members of the Deaconess medical, nursing and dietetic staffs contributed to the sixth edition of *Cancer Manual,* which is published by the Massachusetts Division of the American Cancer Society. **Blake Cady, MD,** coordinator of surgical oncology, was editor-in-chief of this manual for practitioners. **Merle A. Legg, MD,** chairman of the pathology department, **Joanne Perri, RN,** clinical specialist in oncology, and **Jay R. Harris, MD,** radiation therapy department, were members of the editorial committee. Other NEDH authors, whose contributions spanned every aspect of cancer prevention, diagnosis, treatment and rehabilitation, included: **Margaret S. Oberfell, RD,** oncology dietitian specialist; **Drs. George L. Blackburn,** director of the nutrition support service; **John W. Braasch; J. Robert Cassady; Joseph B. Dowd; F. Henry Ellis Jr.,** chief of the department of thoracic and cardiovascular surgery; **Christopher C. Gates; Mark S. Huberman; Melvin J. Krant,** director of the NEDH Cancer Pain Clinic; **Thomas Leavitt Jr.; Edward M. Mahoney; Peter Mauch; Joyce McCaffrey; Eugene F. McDonough Jr.; Daniel Miller,** chief of the otolaryngology section; **Richard A. Oberfield; W. Bradford Patterson; Ferdinand A. Salzman; Michael M. Wick; Marvin S. Wool; Leonard Zinman.**

Personal care was the subject of two articles published in a recent issue of *Internist* and written by two Deaconess physicians, **C. Burns Roehrig,** former president of the medical staff and medical administrative board, and **Judith A. Walingunda,** internist and president of Blackwell Associates, Inc., group practice. Graduates of the medical residency program at the Deaconess, the authors disussed the keystones of an effective physician/patient relationship that lead to long-term patient care and why they are important to quality medical care.

President Laurens MacLure was an auctioneer for WGBH-TV's (Channel 2) "Auction" on June 8 to help raise money to support this public television station.

Dr. Daniel Miller, otolaryngologist, was the guest of honor at the American Laryngological Association's 104th Anniversary Meeting in New Orleans on April 10. Dr. Miller also moderated a panel on induction chemotherapy, surgery and radiation therapy for advanced cancer of the head and neck at the Triological Society Meeting in New Orleans on April 12-14.

Allergy Section Chief **Albert L. Sheffer, MD,** recently participated on a panel on urticaria (type of allergic reaction) and angioedema (swelling on the tongue and lips caused by urticaria) at the 39th Annual Meeting of the American Academy of Allergy and Immunology. A member of the academy's executive committee and chairman of the committee for continuing medical education, Dr. Sheffer also presented a paper on the rare disorder "Acquired Cl inhibitor deficiency," in collaboration with allergists **Drs. K. Frank Austen** and **Julien Melamed.** The authors have presented an additional six cases to the 21 reported in the literature.

Jacob J. Lokich, MD, section chief in medical oncology, moderated a symposium on "Improved cancer chemotherapy — basic studies and clinical trials with infusion schedules" during the 19th Annual Meeting of the American Society of Clinical Oncology, May 22-24 in San Diego, CA. Dr. Lokich also lectured on Phase I and II studies of protracted systemic infusion chemotherapy that were conducted at the Deaconess. **Albert Bothe Jr., MD,** assistant to the chairman of the department of surgery, lectured on "techniques of arterial and venous access for regional and systemic chemotherapy" at the meeting.

Richard Baptista, RPh, clinical hyperalimentation pharmacist, published an article entitled "Medications compatible with hyperalimentation solutions" in the May 1983 issue of *Nutritional Support Services.*

Baptista, Frank Condella, RPh, Edward Gaj Jr., RPh, Asta Grakauskas, Pharm. D., and **Paul Sesin, Pharm. D.** presented posters at the spring seminar of the Massachusetts Society of Hospital Pharmacists in Framingham on April 20. Poster topics dealt with nutrition support, aminoglycoside dosing and bacterial contamination of antineoplastic agents.

Two faculty members from the NEDH School of Nursing recently were certified in specialized areas of nursing. **Mary Catherine Davis, RN, CCRN,** has been certified in Critical Care Nursing by the American Association of Critical Care Nurses. **Marcia Benser, RN,** has been certified in gerontological nursing by the American Nurses Association.

Robert S. Lees, MD, section chief for peripheral vascular diseases, spoke on "Qualitative and quantitative phonoangiography" at the Bioengineering Symposium in Chicago on April 11. Dr. Lees also presented information on present and future noninvasive studies

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Class of '83 graduates from School of Nursing

The NEDH School of Nursing Class of 1983 graduated on June 9 at the Temple Israel in Boston. Baccalaureate exercises were held the same day in the David Marsh Chapel at Boston University. Ellen Leary, RN, cardiac clinical nurse specialist at the Deaconess, delivered the graduation address. Reverend John M. Young, pastor of the First Baptist Church in Richford, Vermont, spoke at the baccalaureate exercises. Details on the graduation, and photographs, will appear in the next issue of PULSE.

tions will help us understand why this mechanism goes awry and can be activated in the wrong place and time," Dr. Hawiger explained. "It will enable us to develop drugs that could prevent or inhibit this destructive process."

In the normal coagulation process, 12 coagulation factors (or proteins) in the blood undergo a series of chemical reactions which convert liquid blood to a solid clot. When there is a need for sealing a "leak" from wounded blood vessels — as a result of surgical wounds or accidental cuts, for example — the clotting mechanism is triggered and prevents a person from bleeding to death. Sometimes, however, the clotting process is activated even though there is no "leak" to seal. This type of clot (a thrombus) can obstruct a blood vessel or can be carried through the bloodstream and become lodged in a smaller blood vessel and cause obstruction there (an embolus). The thrombus or embolus prevents blood from traveling through the vessel, and thus, cuts off vital supplies of oxygen and other nutrients to parts of the body, such as the heart or lungs.

"Dr. Hawiger's research has direct applicability to the many patients at the Deaconess who have diseases related to blood clotting problems," said Dr. Robert C. Moellering Jr., chairman of the NEDH Department of Medicine.

"The new division of experimental medicine," Dr. Moellering continued, "will provide basic research that is as essential to good patient care as is clinical expertise. Dr. Hawiger's work," he explained, "dovetails research already in progress at the Deaconess in our hematology, infectious diseases, peripheral vascular diseases, and cardiology sections."

New approaches to blood clot suppression

In cooperation with Adolf G. Karchmer, MD, chief of the NEDH Infectious Diseases Section, new approaches to the suppression of blood clots on heart valves in infectious endocarditis will be examined. The role of platelet receptors in blocking peripheral blood vessels will be investigated in cooperation with Robert Lees, MD, chief of the NEDH Peripheral Vascular Diseases Section.

Dr. Hawiger's interest in blood coagulation began in 1967 at Vanderbilt University where he emigrated from Warsaw, Poland, on a postdoctoral fellowship. Dr. Hawiger and his research team not only studied the coagulation process itself, whereby liquid becomes solid to form a clot, but exactly *how* this process begins. It was Dr. Hawiger's team who discovered, in 1979, that the body's platelets (the disc-shaped, tiniest corpuscles in the blood) began the hemostatic process after being triggered to bind the coagulation factors, von Willebrand factor and fibrinogen important for linking platelets to the vessel wall and to each other. The team's findings now are being confirmed by other investigators.

In the beginning of the coagulation process, platelets become activated in a fraction of a second in response to any change in the vessel wall — such as a cut — or to an abnormal surface within the blood (e.g., foreign particles, bacteria, cholesterol deposits, tumor cells). Binding sites (receptors) on the platelets sense and bind at least two factors, such as fibrinogin and von Willebrand factor, which anchors platelets to the injured vessel wall. Fibrinogen, however is made of two identical parts — which means it can combine twice in a binding reaction — so it adheres to a second platelet. This continuous binding of fibrinogen and platelets forms the clumps which seal off the wound.

Studying the blood coagulation process

"We are trying to discover the mechanism that controls the activation of platelets and the emergence of receptors on the platelet surface," Dr. Hawiger said. "These receptors are crucial for making platelets stick to the vessel wall and to each other. We also are studying the structure of the proteins in blood (e.g., fibrinogen) which recognizes the receptors in activated platelets," Dr. Hawiger explained.

"It is important to understand the mechanism of communication between fibrinogen and platelets," he pointed out, "because when they adhere and form clumps under abnormal conditions, they can be a powerful and dangerous combination."

For example, platelets stick to atherosclerotic plaque on the inner wall of the arteries because the plaque represents an abnormal surface. The platelet finds fibrinogen; clumps are formed; and then these clumps are swept away and become lodged in smaller blood vessels, causing strokes, heart attacks, angina or gangrene later on in middle or late life.

"We would like to find a new class of drugs that would inhibit this process of platelet binding of fibrinogen," said Dr. Hawiger. Currently, the most popular drug for inhibiting the platelet activation process is aspirin. Aspirin, however, not only affects platelets, but also inhibits the production of a natural platelet inhibitor — prostacyclin.

"Prostacylin is produced in the human body by the endothelial cells (cells that line the inner surface) of blood vessels," said Dr. Hawiger. "It inhibits stickiness and clumping of platelets. We obtained the initial evidence showing prostacyclin's effect on platelet receptors which precludes binding of coagulation factors to the platelet surface," Dr. Hawiger added. "With colleagues at Vanderbilt, we found that prostacyclin reduces the incidence of fatal arrhythmias (uneven heart beats) due to coronary artery occlusion (obstruction) in an experimental model."

"Unfortunately," Dr. Hawiger further explained, "prostacyclin cannot be taken by mouth because it is destroyed by stomach acid, which limits administration to intravenous methods. Pharmaceutical companies are trying to find prostacyclin-like drugs which can be taken orally."

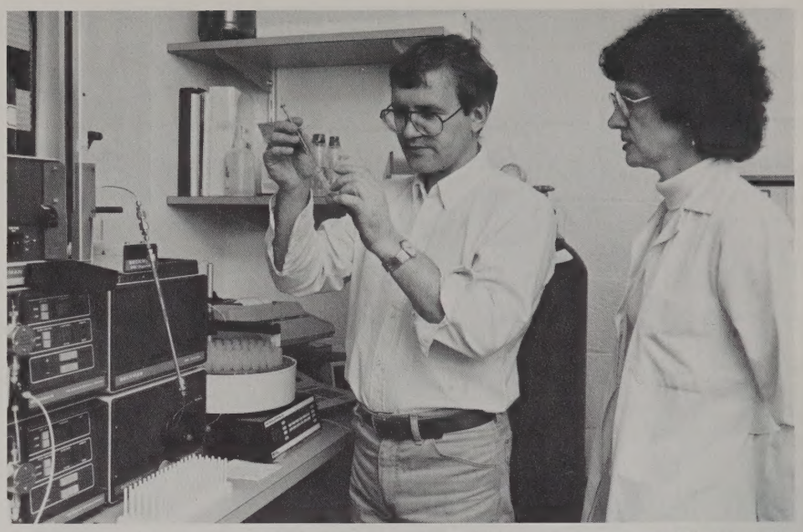
Dr. Hawiger and his colleagues recently discovered the region on fibrinogen that recognizes platelet receptors. The same region on fibrinogen that recognizes platelet receptors also recognizes receptors on staphylococci. These bacteria occur in grapelike clusters in the blood and can cause various types of localized infections. This phenomenon explains why staphylococci appear in clumps and also may be the reason the bacteria adhere to the blood clots on the surface of the heart valves and blood vessels.

Thirteen years ago, Dr. Hawiger applied this phenomenon of clumping of staphylococci to detect fragments of fibrinogen and fibrin degradation products that appear in blood during dissolution of blood clots. Today, the "staphylococcal clumping test" is used as a diagnostic tool in detecting patients with several blood clot-related diseases such as disseminated intravascular coagulation, eclampsia (convulsions and coma in pregnant or recently pregnant women) and acute thrombophlebitis.

Dr. Hawiger's research team

Over the years, several scientists have joined Dr. Hawiger in his work. Some of these research team members have accompanied him to the Deaconess. They are: Marek Kloczewiak, PhD, and Sheila Timmons, who have been concentrating on the binding between fibrinogen and platelets; and a visiting scientist, Masato Sakon, MD, PhD, from the University of Osaka, Japan, who is conducting research on the mechanism of formation of blood clots that are found on the membrane lining of the heart valves during endocarditis (inflammation of the heart cavity or valve lining). Dr. Sakon is experimenting with the prevention of these clots in animals by using antiplatelet (prostacyclin) and anticoagulant (heparin) drugs.

Dr. Hawiger and his colleagues have written more than 100 reports, reviews and articles on immunology, infectious diseases, thrombosis and hemostasis. In addition to Dr. Hawiger's work at the Deaconess, he is a member of the National Institute of Health Hematology Study Section which evaluates government grant applications in the field; is editor of *Thrombosis Research,* and of a volume on platelets in the *Methods in Enzymology* book series to be published by Academic Press; and is a member of the American Society for Clinical Investigation and the Association of American Physicians.



Marek Kloczewiak, PhD, senior research associate, and Shelia Timmons, research associate, demonstrate the high pressure liquid chromotography system in the division of experimental medicine laboratories. The system isolates blood proteins and peptides for experimental use in studies on the blood coagulation process.

Nationwide radio network interviews medical staff members

Five members of the NEDH medical staff have been interviewed during the past three months by the nationwide Physicians Radio Network (PRN), a closed-circuit, 24-hour radio program of medical news.

Interviewed were: Department of Surgery Chairman William V. McDermott, MD, on the complex medical and economical issues surrounding liver transplantation; chief of the department of diagnostic radiology, Melvin E. Clouse, MD, on his work in blocking off arteries that nourish liver tumors, as a means of reducing or killing the tumor; David Bear, MD, psychiatrist on the neurology of emotion; Blake Cady, MD, coordinator of surgical oncology, on the costs of cigarette smoking to nonsmokers; Jacob J. Lokich, MD, section chief in medical oncology, on his studies on the efficacy of the ambulatory infusion pump for chemotherapy patients.

The interviews were broadcast during PRN's daily programs, consisting of a one-hour program repeated every hour, 24-hours-a-day. The program changes daily and comprises reviews of major journal articles, reports on health care policy, features on clinical and research discoveries, and information on medical practice, management and investment.

PRN broadcasts to 80,000 physicians in 35 cities, including 3,500 physicians in the Boston area. Originating from New York City, PRN is available to any physician, free, if he/she is within broadcast range of a central city, is in patient care, and practices one of ten specialties.

28th Annual Service Award Dinner honors long-term employees

Next year's location for the event would have to be the Boston Garden, joked President Laurens MacLure as he addressed more than 400 people who packed the Sheraton Boston Ballroom for the NEDH 28th Annual Service Award Dinner on April 29.

Since the first service award dinner was held in 1955, the number of awards dinner attendees has grown steadily as the number of long-term employees has increased. This year, the eligible employees who were invited to the dinner (those with five or more years of service) represented 45 percent of the full-time staff. These 1,046 people have completed a total of 11,276 years of service to the hospital.

MacLure told the employees that they were "the backbone of our staff. You have helped make our hospital what it is today. You understand the emphasis we place on patient care," he said, "and, as a group, you provide the leadership necessary to see us through the adjustments to Chapter 372."

Board of Trustees Chairman Marvin G. Schorr cited the employees generous contributions to the hospital and community service over the past year, including participation in the NEDH Community Blood Donor Program, and gifts to the hospital's annual appeal and to the United Way. "This generosity of spirit will be especially important in the future as the entire health care system comes under increasing economic pressure, and we all struggle for that balance between what we want to do and what we *can* do," Schorr commented. "But no matter what the pressures, we are determined to continue our commitment to high quality patient care, to the education and training of health care professionals and to keeping up with the science and technology needed to keep us in the forefront of modern medicine."

Director Richard E. Lee presented awards of merit to seven long-term employees, including: Ellen D. Howland, 40 years; Conrad P. Castro, 35 years; Margaret A. Burns and Ramon Gonzalez, 30 years; Joan E. Harlamert, Alice Malone, Merle A. Legg, MD, 25 years.

In honor of Howland's 40 years of service, the hospital made a contribution to the Howland Nursing Scholarship Fund which benefits the NEDH School of Nursing. Howland had established the fund ten years ago in memory of her mother, Idabelle.

Following dinner and remarks by the guest speakers, a videotape entitled, "The Deaconess: Yesterday, Today, Tomorrow," was viewed. The evening's musical entertainment was provided by the group, WEB.

Mario and Marcelina Leyva, both of building services, chat during cocktails.

Helen Siggers, chaplaincy, and her husband, Otis, thoroughly enjoy tripping the light fantastic.

Employees who received awards of merit at the dinner in recognition of their years of service included: (back row, l-r) Director Richard E. Lee; Merle A. Legg, MD, chairman of the department of pathology (25 years); President Laurens MacLure; (front row, l-r) Joan E. Harlamert, nursing service (25 years); Ellen D. Howland, associate director and director of the department of nursing (40 years); Margaret A. Burns, director of surgical services (30 years); Ramon Gonzalez, laundry (30 years).

Samuel Marotta, barber, makes a toast to his friends (l-r) Shirley Hillson, nursing service; Kaye Waters, retiree, service coordination; Monica MacDonald, retiree, dietary.

Andrea Tractenberg (center) blood donor recruiter, converses with two of her favorite people — her husband, Mark (l), and John Dolan, recent retiree from building services and a one-gallon blood donor.

Deaconess employees swing to the sounds of the band, WEB.

Employees receive service award pins

It was a special day for Conrad Casto (r), materials management, when he received his 35-year service pin from former NEDH Executive Vice President Robert D. Lowry, at the Deaconess service awards coffee, held in the Harris Hall Livingroom on April 8. Casto joined 60 Deaconess employees in celebrating their five, ten, fifteen, twenty or more years of service to the hospital.

Robert D. Lowry also represented the hospital in extending thanks to Ramon Gonzales of the laundry, who has been working at the Deaconess for 30 years.

***TEN-YEAR RECIPIENTS:** (standing, l-r) Jean Proestakis, booking; Thomas Lane, diagnostic radiology; Louise Taylor, pathology; Anthony Fortes and Rosemary Bambrick, dietary; Alan Kelson, engineering and maintenance. (Sitting, l-r) Francisco Muriel, dietary; Robert Mosey, nursing service; Kathleen White, pathology.*

***FIVE-YEAR RECIPIENTS:** (l-r) Pamela Dejoie, pathology; Gail Davis, medical audit; Lynette Eckes, RN, recovery room; Melvina Dooley, dietary; Paul Egan and Geraldine Murphy, RN, nursing service; Karen Souders, surgical services.*

***FIVE- AND TEN-YEAR RECIPIENTS:** (l-r) Paula Kasulis, nuclear medicine; Leonard Cipullo, SWRL; Gretchen Paradis, Deaconess Medicine; Catherine Wright, accounting; Suzi Flanagan and Herbert Bennett, dietary (5 yrs.); Janet Lewis, surgical services (10 yrs.).*

***FIFTEEN- AND TWENTY-YEAR RECIPIENTS:** (l-r) Eleanor Lowry, director, patient relations (20 yrs.); Ann Downs, print shop (15 yrs.); Patricia Wilcox, patient service (15 yrs.); Lillian Torriere, service coordination (20 yrs.).*

News in Brief *(continued from page 5)*

for cerebrovascular disease at the April 25 meeting of the American Academy of Neurology in San Diego, CA.

Dr. Jack J. Hawiger, director of the new division of experimental medicine, chaired a clinical symposium on the interaction of platelets with the vessel wall (in studies on blood coagulation), and spoke on prostacyclin (drug) regulation of platelet receptors, at the 67th Annual Meeting of the Federation of American Societies for Experimental Biology and Guest Societies, on April 10–15 in Chicago, IL.

Paul Sesin, PharmD, RPh, presented grand rounds on "Cephalosporin antibiotics — clinical perspectives" at the Tobey Hospital in Wareham, Massachusetts on April 1. Sesin also lectured on drug-induced anemias and pulmonary disease to members of the Maine Pharmaceutical Association in Bangor and Lewiston on April 19 and 20.

Director of Dietetics **Joyce B. Tower, RD,** has been elected chairman of the education division of the American Dietetic Association's Council on Practice. Tower will serve as liaison between dietetic educators and practitioners. She also is a former member of the executive committee of the association's Council on Education, and is chairman of the standards of education committee of that council.

The "rules" of the health care industry change in Massachusetts under Chapter 372 (see page 1)

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